



Lead scientist position in applied quantum algorithms

The theoretical division of *Quantum Algorithms* (<https://quantum.tii.ae/quantum-algorithms>), directed by Prof. Leandro Aolita at the Quantum Research Centre (QRC) of the Technology Innovation Institute (TII) in Abu Dhabi, United Arab Emirates, is seeking extremely talented and motivated experienced researchers to fill a vacancy of lead scientist. This is an intermediate position between postdoctoral researcher and director.

TII is a newly-established, top-funding state initiative that aims at becoming a major international hub for Science & Technology (<https://www.tii.ae/>). The QRC has recently launched world-class theoretical and experimental research groups on different quantum technologies (<https://quantum.tii.ae/about-us-quantum>).

The *Quantum Algorithms Group* focusses on the study and development of quantum algorithms, including optimisations, matrix-arithmetics-based problems, machine learning, Monte-Carlo estimations, and complex quantum simulations, e.g. Our goals are two-fold: practical primitives for near-term quantum hardware as well as advanced procedures for future, fully-fledged universal quantum computers. Research activities include hybrid classical-quantum approaches, neural- and tensor-network tools, quantum signal processing, quantum error correction and mitigation, computational complexity, quantum-inspired and de-quantized algorithms, benchmarking/characterization of quantum devices, and quantum-circuit compiling, among others.

The candidate will supervise a team focussed on practical applications of quantum algorithms with commercial potential and quantum programming. They should have a PhD in Quantum Information and Computation, or related areas, and at least 4 years after their PhD of R&D experience in classical and quantum algorithms, either in academia or within the private quantum-software sector. The appointment will initially be for 5 + 2 years, but further extensions are possible upon mutual interest. Salaries are significantly above the corresponding average levels in the USA or Europe. Besides, other important personal and family allowances are provided, and traveling funds are abundant. Moreover, there are concrete prospects for TII-sponsored spinoffs.

Applications must be sent to leandro.aolita@tii.ae and should consist of a curriculum vitae, a brief letter of motivation (max. 1 page), a short statement of research interests and experience (max. 2 pages), and a list of publications or patents. At least two recommendation letters should be arranged to be sent directly to the same E-mail.

The **application deadline is March 14th 2022**. The starting date can be any time before August 2022.